

MAIL DATA CANCELLED  
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OFFICE OF THE SECRETARY OF COMMERCE  
PATENT & TRADEMARK OFFICE

SECURITY TESTING

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<120> System for the Expression of Heterologous Antigens as Fusion Proteins

<130> LEXSA P-13DIV2

<140> 09/612,925

<141> 2000-07-10

<150> 08/930,917

<151> 1997-09-16

<150> CU97/00001

<151> 1997-01-17

<160> 21

<170> PatentIn version 3.1

<210> 1

<211> 47

<212> PRT

<213> Neisseria meningitidis

<400> 1

Met Leu Asp Lys Arg Met Ala Leu Val Glu Leu Lys Val Pro Asp Ile  
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Gly Gly His Glu Asn Val Asp Ile Ile Ala Val Glu Val Asn Val Gly  
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Asp Thr Ile Ala Val Asp Asp Thr Leu Ile Thr Leu Glu Thr Asp  
35 40 45

<210> 2

<211> 18

<212> PRT

<213> Neisseria meningitidis

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Thr Thr Cys Cys Ala Thr Gly Gly Thr Ala Gly Ala Thr Ala Ala Ala  
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Ala Gly

<210> 3

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<213> Neisseria meningitidis

&lt;400&gt; 3

Thr Thr Thr Cys Thr Ala Gly Ala Thr Cys Cys Ala Ala Ala Gly Thr  
1 5 10 15

Ala Ala

&lt;210&gt; 4

&lt;211&gt; 26

&lt;212&gt; PRT

&lt;213&gt; Neisseria meningitidis

&lt;400&gt; 4

Gly Gly Cys Gly Gly Thr Thr Cys Thr Gly Cys Cys Gly Ala Thr Thr  
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Ala Ala Gly Gly Ala Thr Cys Cys Gly Ala  
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&lt;210&gt; 5

&lt;211&gt; 146

&lt;212&gt; PRT

&lt;213&gt; Neisseria meningitidis

&lt;400&gt; 5

Thr Thr Cys Cys Ala Thr Gly Gly Thr Ala Gly Ala Thr Ala Ala Ala  
1 5 10 15

Ala Gly Ala Ala Thr Gly Gly Cys Thr Thr Thr Ala Gly Thr Thr Gly  
20 25 30

Ala Ala Thr Thr Gly Ala Ala Ala Gly Thr Gly Cys Cys Cys Gly Ala  
35 40 45

Cys Ala Thr Thr Gly Gly Cys Gly Gly Ala Cys Ala Cys Gly Ala Ala  
50 55 60

Ala Ala Thr Gly Thr Ala Gly Ala Thr Ala Thr Thr Ala Thr Cys Gly  
65 70 75 80

Cys Gly Gly Thr Thr Gly Ala Ala Gly Thr Ala Ala Ala Cys Gly Thr  
85 90 95

Gly Gly Gly Cys Gly Ala Cys Ala Cys Thr Ala Thr Thr Gly Cys Thr  
100 105 110

Gly Thr Gly Gly Ala Cys Gly Ala Thr Ala Cys Cys Cys Thr Gly Ala  
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Thr Thr Ala Cys Thr Thr Thr Gly Gly Ala Thr Cys Thr Ala Gly Ala  
130 135 140

Ala Ala  
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<400> 6

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20 25 30

Asp Thr Ile Ala Val Asp Asp Thr Leu Ile Thr Leu Asp Leu Glu  
35 40 45

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Cys Thr Ala Gly Ala Thr Thr Thr Gly Ala Thr Ala Thr Cys Ala Gly  
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Gly Ala Thr Cys Cys Thr Gly Ala Thr Ala Thr Cys Ala Ala Ala Thr  
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Ser Arg Gly Ile Arg Ile Gly Pro Gly Arg Ala Ile Leu Ala Thr  
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<400> 10

Arg Gln Ser Thr Pro Ile Gly Leu Gly Gln Ala Leu Tyr Thr Thr  
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Arg Lys Ser Ile Thr Lys Gly Pro Gly Arg Val Ile Tyr Ala Thr  
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Arg Lys Arg Ile His Ile Gly Pro Gly Arg Ala Phe Tyr Thr Thr  
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Arg Gln Arg Thr Ser Ile Gly Gln Gly Gln Ala Leu Tyr Thr Thr  
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Ala Gly Gly Gly Ala  
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&lt;210&gt; 18

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&lt;212&gt; PRT

&lt;213&gt; Human immunodeficiency virus type 1

&lt;400&gt; 18

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35 40 45Ser Thr Pro Ile Gly Leu Gly Gly Ala Leu Tyr Thr Thr Ala Gly Gly  
50 55 60Gly Ala Arg Lys Ser Ile Thr Lys Gly Pro Gly Arg Val Ile Tyr Ala  
65 70 75 80Thr Ala Gly Gly Gly Ala Arg Lys Arg Ile His Ile Gly Pro Gly Arg  
85 90 95Ala Phe Tyr Thr Thr Ala Gly Gly Gly Ala Arg Lys Arg Ile Thr Met  
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115 120 125Arg Ile Gln Arg Gly Pro Gly Arg Ala Phe Val Thr Ile  
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&lt;211&gt; 162

&lt;212&gt; PRT

&lt;213&gt; Human immunodeficiency virus type 1

&lt;400&gt; 19

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20 25 30Asp Thr Ile Ala Val Asp Asp Thr Leu Ile Thr Leu Asp Leu Asp Ser  
35 40 45

Arg Gly Ile Arg Ile Gly Pro Gly Arg Ala Ile Leu Ala Thr Ala Gly

50                      55                      60  
 Gly Gly Ala Arg Gln Ser Thr Pro Ile Gly Leu Gly Gly Ala Leu Tyr  
 65                      70                      75                      80  
 Thr Thr Ala Gly Gly Gly Ala Arg Lys Ser Ile Thr Lys Gly Pro Gly  
                     85                      90                      95  
 Arg Val Ile Tyr Ala Thr Ala Gly Gly Gly Ala Arg Lys Arg Ile His  
                     100                      105                      110  
 Ile Gly Pro Gly Arg Ala Phe Tyr Thr Thr Ala Gly Gly Gly Ala Arg  
                     115                      120                      125  
 Lys Arg Ile Thr Met Gly Pro Gly Arg Val Tyr Tyr Thr Thr Ala Gly  
                     130                      135                      140  
 Gly Gly Ala Ser Ile Arg Ile Gln Arg Gly Pro Gly Arg Ala Phe Val  
                     145                      150                      155                      160

Thr Ile

<210> 20  
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Gly Gly His Glu Asn Val Asp Ile Ile Ala Val Glu Val Asn Val Gly  
 20                      25                      30

Asp Thr Ile Ala Val Asp Asp Thr Leu Ile Thr Leu Asp Leu Asp Ser  
 35                      40                      45

Arg Gly Ile Arg Ile Gly Pro Gly Arg Ala Ile Leu Ala Thr Ala Gly  
 50                      55                      60

Gly Gly Ala Arg Gln Ser Thr Pro Ile Gly Leu Gly Gln Ala Leu Tyr  
 65                      70                      75                      80

Thr Thr Ala Gly Gly Gly Ala Arg Lys Ser Ile Thr Lys Gly Pro Gly  
 85                      90                      95

Arg Val Ile Tyr Ala Thr Ala Gly Gly Gly Ala Arg Lys Arg Ile His  
 100                      105                      110

Ile Gly Pro Gly Arg Ala Phe Tyr Thr Thr Ala Gly Gly Gly Ala Arg  
 115                      120                      125

Lys Arg Ile Thr Met Gly Pro Gly Arg Val Tyr Tyr Thr Thr Ala Gly  
130 135 140

Gly Gly Ala Arg Gln Arg Thr Ser Ile Gly Gln Gly Gln Ala Leu Tyr  
145 150 155 160

Thr Thr Ala Gly Gly Gly Ala Thr Ser Ile Thr Ile Gly Pro Gly Gln  
165 170 175

Val Phe Tyr Arg Thr Gly Ala Gly Gly Gly Ala Ser Ile Arg Ile Gln  
180 185 190

Arg Gly Pro Gly Arg Ala Phe Val Thr Ile  
195 200

<210> 21  
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<212> DNA  
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tggcgacagt caatctaccc ctattggttt aggtcaggct ctgtatacga ctgccggcgg  
120

tggtgcgcgc aaaagtatca ccaagggtcc aggcgcgctc atttacgcca ccgcgggcgg  
180

cggtgcccggt aagcgatcc acattggccc aggcctgca ttctatacta cagcaggtgg  
240

tggcgacagt aaacgcatca ctatgggtcc tggtgcgctc tattacacga ccgctggcgg  
300

cggtgctagc attcgcattc aacgcggccc tggtcgtgca ttgtgacca tatgataacg  
360

cgggatcc  
368